

REMARKS

Claims 10, 12 – 18, 36, 37, and 39 - 51 are pending. Claims 10, 17 and 36 are amended herein. Claims 11 and 38 are canceled. Claims 45 – 51 have been added. No new matter is added as a result of the claim amendments.

102(b) Rejections

Claims 10, 12 – 14, 16, 36, 39, 40 and 42 are rejected under 35 U.S.C. § 102(b) as being anticipated by Taylor, et al. (“Taylor,” US 5,536,993). Applicants have reviewed the cited reference and respectfully submit that the present invention as recited in Claims 10, 12 – 14, 16, 36, 39, 40 and 42 are not anticipated or shown by Taylor.

Taylor does not teach, show or suggest “a barrier layer (which) prevents electron bombardment” as recited by independent Claims 10 and 36. Taylor describes insulating layer 64, which may comprise SiO₂ “of approximately 50 nanometers.” Nowhere does Taylor suggest that this thickness of this material is sufficient to “prevent electron bombardment” as recited by independent Claims 10 and 36. Moreover, the present Application recites an SiO₂ “thickness of approximately 100 nanometers” as “sufficient to prevent substantial penetration of electrons” (page 36 lines 19 – 23). Applicants respectfully assert that a difference of 100% in the thickness of material is a substantial difference. Therefore, Applicants respectfully assert that layer 64 of Taylor does not inherently prevent electron bombardment.

Therefore, for these reasons, Applicants respectfully assert that independent Claims 10 and 36 are not anticipated by Taylor, and therefore the rejection of this Claim under 35 U.S.C. § 102(b) is traversed.

Further, Taylor does not teach, disclose or suggest a cathode substrate or structure comprising “high-sodium glass” as recited in independent Claims 10 and 36. Applicants respectfully assert that independent Claims 10 and 36 are not anticipated by Taylor, and therefore the rejection of this Claim under 35 U.S.C. § 102(b) is traversed for this additional reason.

Claims 12 - 14 and 16 are dependent on Claim 10. Applicants also respectfully submit that Claims 12 - 14 and 16 traverse the Examiner’s basis for rejection under 35 U.S.C. § 102(b) as these claims are dependent on an allowable base claim and recite additional limitations.

Claims 39, 40 and 42 are dependent on Claim 36. Applicants also respectfully submit that Claims 39, 40 and 42 traverse the Examiner’s basis for rejection under 35 U.S.C. § 102(b) as these claims are dependent on an allowable base claim and recite additional limitations.

Claims 10, 12 – 15, 36, 37 and 39 – 41 are rejected under 35 U.S.C. § 102(b) as being anticipated by Borel, et al. (“Borel;” US 4,857,161). Applicants have reviewed the cited reference and respectfully submit

that the present invention as recited in Claims 10, 12 – 15, 16, 36, 37 and 39 – 41 are not anticipated or shown by Borel.

Borel does not teach, disclose or suggest a cathode substrate or structure comprising “high-sodium glass” as recited in independent Claims 10 and 36. Applicants respectfully assert that independent Claims 10 and 36 are not anticipated by Borel, and therefore the rejection of this Claim under 35 U.S.C. § 102(b) is traversed for this reason.

Claims 12 - 15 are dependent on Claim 10. Applicants also respectfully submit that Claims 12 - 15 traverse the Examiner’s basis for rejection under 35 U.S.C. § 102(b) as these claims are dependent on an allowable base claim and recite additional limitations.

Claims 37 and 39 - 41 are dependent on Claim 36. Applicants also respectfully submit that Claims 37 and 39 - 41 traverse the Examiner’s basis for rejection under 35 U.S.C. § 102(b) as these claims are dependent on an allowable base claim and recite additional limitations.

Claims 10, 18, 36 and 44 are rejected under 35 U.S.C. § 102(b) as being anticipated by Macaulay, et al. (“Macaulay;” US 5,851,669). Applicants have reviewed the cited reference and respectfully submit that the present invention as recited in Claims 10, 18, 36 and 44 are not anticipated or shown by Macaulay.

Macaulay does not teach, disclose or suggest a cathode substrate or structure comprising “high-sodium glass” as recited in independent Claims 10 and 36. Applicants respectfully assert that independent Claims 10 and 36 are not anticipated by Macaulay, and therefore the rejection of this Claim under 35 U.S.C. § 102(b) is traversed for this reason.

Further, Macaulay does not teach, disclose or suggest a “substantially continuous barrier layer of substantially uniform thickness” as recited in independent Claims 10 and 36. With reference to layer 22, Macaulay states, “Region 22 is typically a patterned layer containing a group of parallel lines ... (column 6 lines 5 – 7).” Applicants respectfully assert that a patterned layer of parallel lines is neither substantially continuous nor of substantially uniform thickness. Applicants respectfully assert that independent Claims 10 and 36 are not anticipated by Macaulay, and therefore the rejection of this Claim under 35 U.S.C. § 102(b) is traversed for this additional reason.

Claim 18 is dependent on Claim 10. Applicants also respectfully submit that Claim 18 traverses the Examiner’s basis for rejection under 35 U.S.C. § 102(b) as this claim is dependent on an allowable base claim and recites additional limitations.

Claim 44 is dependent on Claim 36. Applicants also respectfully submit that Claim 18 traverses the Examiner’s basis for rejection under

35 U.S.C. § 102(b) as this claim is dependent on an allowable base claim and recites additional limitations.

103(a) Rejections

Claims 10, 17, 36 and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Taylor in view of Kanicki ("Kanicki;" "Amorphous and microcrystalline semiconductor devices: optoelectronic devices / Jerzy Kanicki, editor"). Applicants have reviewed the cited references and respectfully submit that the present invention as recited in Claims 10, 17, 36 and 43 is not anticipated nor rendered obvious by Taylor in view of Kanicki. Applicants respectfully note that Claims 11 and 38, originally rejected in the Office Action, have been canceled. However, independent Claims 10 and 36 as currently amended contain matter originally in Claims 11 and 38.

The Office Action asserts that "It would have been obvious to use a soda-lime substrate, as disclosed by Kanicki." Applicants understand Kanicki to discuss "semiconductor devices," and that the referenced passages of Kanicki, section 3.5.3.1, refer to the fabrication of thin film transistors for use in liquid crystal displays. Claims 10, 17, 36 and 43 are directed to field emission display devices, which are not semiconductor devices. Field emission display devices do not conventionally comprise thin film transistors, and are substantially different in construction and operation from liquid crystal displays. Applicants respectfully assert that due to the differences in the subject fields, a combination of Taylor with Kanicki is neither suggested nor

obvious to one of ordinary skill in the art. Further, the references do not contain any suggestion that they be combined.

Therefore, Applicants respectfully submit that Claims 10, 17, 36 and 43 traverse the basis for rejection under 35 U.S.C. § 103(a) as these claims are not rendered obvious by Taylor et al. in view of Kanicki.

The Office Action states that Taylor “include(s) a ion barrier layer.” Applicants respectfully assert that Taylor does not teach, disclose or suggest such a barrier. Applicants respectfully note that Taylor does not use the term “barrier,” and the only two uses of the term “ion” refer to “a reactive ion etch process” rather than a structural element.

Further, neither Taylor nor Kanicki, alone or in combination, teach, disclose or suggest a “barrier layer (which) prevents the migration of sodium” as recited in Claims 17 and 43. Therefore, Applicants respectfully submit that Claims 17 and 43 traverse the basis for rejection under 35 U.S.C. § 103(a) for these additional reasons.

CONCLUSION

In light of the above remarks, Applicants respectfully request reconsideration of the rejected Claims.

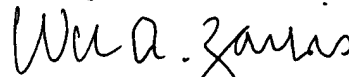
Based on the arguments presented above, Applicants respectfully assert that Claims 10, 12 – 18, 36, 37 and 39 - 51 overcome the

rejections of record and, therefore, Applicants respectfully solicit allowance of these Claims.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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